ಬೆಂಗಳೂರುನೀರುಸರಬರಾಜುಮತ್ತುಒಳಚರಂಡಿಮಂಡಳಿ

BANGALORE WATER SUPPLY AND SEWERAGE BOARD

Office of the Chief Engineer (Cauvery Headworks), 8th Floor, Cauvery Bhavan, K.G.Road, Blore-560 009.

No.BWSSB/CE(CH)TE/ACE(CH)/TA/101/2026/ 206 **/2026-27** **Date:** 25/6/2026

Addendum No.1

(Through Karnataka public procurement Portal)

https://kppp.karnataka.gov.in

Name of the Work: Work of up-gradation of the existing SCADA and PLC system at IV stage phase-II pumping station at T.K.Halli under jurisdiction of EE(K-O&M)-1 division

Repliers to Pre-Bid Quarries, Pre-Bid Meeting Dt:23/06/2026

IFT No.: No. BWSSB/CE(CH)TE/TA-01/101/142/2026-27 Dated:06 /06/2026

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
1.	CL.2.3,CL.2.9; BOQ Title	The tender title, BOQ quantities (10 pump sets) and IFT correspond exclusively to the T.K. Halli IV Stage Phase-II pumping station. However, clauses 2.3, 2.9 and the minimum scope table repeatedly reference three CWPS T.K. Halli, Harohalli and Tataguni together with Surge Vessel and J.K. Doddi instrumentation, under the heading 'Stage 4 Phase I'.	BWSSB is requested to confirm that the scope of this tender is strictly limited to the T.K. Halli IV Stage Phase-II pumping station (10 pump sets), and that all references to Harohalli, Tataguni, J.K. Doddi and the three-CWPS Stage 4 Phase I scope are not applicable to this package.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1.

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
2.	CL.2.2.9,CL.2.3; BOQ Items 22,27	Clause 2.2.9 restricts the current scope of 'Control' to alarm/alert-based monitoring only. Remote pump operation — including tripping, auto/manual mode selection and Local/Remote changeover is explicitly described as a future provision. Consistently, the BOQ contains no line items for control wiring, interlocks, contactors or PLC I/O associated with pump operation.	BWSSB is requested to confirm in writing that remote operation of pumps and auto/manual operation from the Touch Screen Pump Monitoring Station are excluded from the priced scope of this tender, so that bidders do not inadvertently price these items.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1
3.	CL.2.9,CL.2.3,CL .2.14.1, Table 1	Clauses 2.9 and 2.3 require inter-station communication and communication failure alarms spanning T.K. Halli, Harohalli, Tataguni and J.K. Doddi. The IPMS under this contract is a new IoT-based system, entirely independent of any existing SCADA infrastructure at Harohalli, Tataguni or J.K. Doddi.	BWSSB is requested to confirm that communication failure monitoring between T.K. Halli, Harohalli, Tataguni and J.K.Doddi is excluded from the scope of this contract. The contractor's obligation should be limited to providing a communication interface at T.K. Halli in a state ready for future integration when other stations are commissioned.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1
4.	CL.2.14.1,Table 1;CL.2.3	Clause 2.14.1 and Table 1 define downstream/upstream interconnected alert logic spanning T.K. Halli (upstream-most station), Harohalli and Tataguni. Alert types include downstream pressure, level and power disruption.	BWSSB is requested to confirm that interconnected alert requirements referencing Harohalli, Tataguni and J.K. Doddi are not applicable to this package, and that the contractor's scope is limited to transmitting T.K. Halli operational data in a format compatible with future interconnected alert integration.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1
5.	CL.2.2.9 vs. CL.2.20-2.31	Clause 2.2.9 defines 'Control' and 'SCADA' as limited to alarm/alert monitoring functions, with remote and auto/manual pump operation as a future provision. Separately, clauses 2.20	BWSSB is requested to confirm that the 'Control' definition in clause 2.2.9 governs the priced scope — i.e., that 'SCADA' for this package means IoT/IPMS-based alarm/alert and monitoring only — and that the	Refer updated document Part-2_Perticular instrumentation control

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
		to 2.31 describe a full PLC-based, dual-redundant SCADA control system with hot-standby PLC, RIO panels, SCADA servers and associated hardware.	PLC/SCADA hardware specifications in clauses 2.20 to 2.31 are not within the priced scope of this contract.	and Automation requirement of IPMS.doc attached as Corrigendum-1
6.	CL.2.31,CL.2.32; BOQ Items 24,25	Clause 2.31 specifies engineering and operator workstations and monitors; clause 2.32 specifies a colour multifunction printer as part of the SCADA control room. The BOQ provides one desktop computer (Item 25) and one 65inch Smart LED TV (Item 24). No additional workstations or printer appear in the BOQ.	BWSSB is requested to confirm that the workstation and printer requirements under clauses 2.31 and 2.32 are excluded from this contract's priced scope, with BOQ Item 25 (one desktop computer) being the only computing device payable. If a colour multifunction printer is also required, a corresponding BOQ line item should be added	Consider this scope under BOQ item No.25
7.	CL.2.18.1; BOQ Item 3	BOQ Item 3 specifies 30 Nos. of 'IoT Temperature Sensors for Motor Bearings'. The motors at T.K. Halli Stage IV Phase-II are existing in-service units, whose bearing temperature RTDs are already embedded in the motor casing and their signal cables are terminated at marshal boxes outside the casing. Reading bearing temperatures from these existing terminations requires no motor dismantling.	BWSSB is requested to: (a) amend the description in BOQ Item 3 from 'IoT Temperature Sensor for Motor Bearing' to 'Bearing Temperature Scanner' — a multi-channel scanner reading existing RTD signals at the marshal box terminations; and (b) revise the quantity to 10 Nos. (one scanner per pump set). This eliminates the need for any motor dismantling.	Tender conditions prevail
8.	CL.2.18.9,2.18.10 ,2.18.15	Clause 2.18 specifies several IoT devices — IIoT Noise Sensor (cl. 2.18.9), RPM Sensor (cl. 2.18.10), Web Camera (cl. 2.18.12) and Thermal Image Camera (cl. 2.18.15) — as part of the IPMS system. None of these items have corresponding line items in the BOQ.	BWSSB is requested to confirm that the IIoT Noise Sensor (cl. 2.18.9), RPM Sensor (cl. 2.18.10), Web Camera (cl. 2.18.12) and Thermal Image Camera (cl. 2.18.15) are excluded from the scope of this tender. If any are mandatory, corresponding BOQ line items with quantities should be added.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
				Corrigendum-1
9.	CL.2.35, CL.2.18.12; BOQ – no CCTV item	Clause 2.35 (SCADA Control Room Design) and cl. 2.18.12 (IIoT Web Camera) reference visual monitoring of the pumping station and control room. No BOQ line item exists for a CCTV or video surveillance system.	BWSSB is requested to confirm whether a dedicated CCTV surveillance system is within the scope of this contract. If it is, a corresponding BOQ line item specifying number, type and locations of cameras should be added. If it is not, written confirmation is requested so that bidders exclude such costs.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1
10.	CL.2.2.8,CL.2.3; BOQ-no line item	Clauses 2.2.8 and 2.3 identify dismantling of existing ICA panels, devices and cabling as a mandatory pre-requisite to commencement of procurement. The scope of this contract is the supply and installation of a new IoT-based IPMS — not the replacement of the legacy ICA system.	BWSSB is requested to confirm that dismantling of existing ICA items and cables is excluded from this tender's scope. If dismantling is mandatory, an inventory of items to be removed and a dedicated BOQ line item should be provided to allow transparent and consistent pricing.	The quoted rate should include dismantling of existing ICA items and cables.
11.	CL.2.18.1,CL.2.1 1.11;BOQ Item 1	BOQ Item 1 describes the deliverable as an 'IoT Temperature Scanner for Motor Winding'. Clause 2.18.1 refers to an 'IoT Temperature Sensor for Motor Windings' with probe dimensions of 6–10 mm diameter and 40–50 mm length, implying a contact-type RTD/PT100 probe inserted into the motor winding slot.	BWSSB is requested to amend the terminology in clause 2.18.1 from 'IoT Temperature Sensor for Motor Windings' to 'IoT Temperature Scanner for Motor Windings', consistent with BOQ Item 1, and to confirm that the solution does not require motor dismantling.	Tender conditions prevail
12.	Function Req.19.21;CL.2.1 6,CL.2.18.8;BOQ Item 12	Functional Requirement No. 19 mandates real-time pump efficiency calculation using the thermodynamic method, requiring very high-accuracy differential pressure and water temperature measurement at pump suction	BWSSB is requested to confirm that the thermodynamic method of pump efficiency calculation is excluded from this tender's scope, with efficiency to be calculated using the flow/energy-water-nexus method via the existing and newly supplied electromagnetic flow meters.	Tender conditions prevail

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		and discharge. Cl. 2.18.8 confirms that electromagnetic flow meters are already installed at T.K. Halli Stage IV Phase-II for all pumps except Pump No. 2 (covered by BOQ Item 12).		
13.	CL.1.3	The reference standards list in cl. 1.3 comprises legacy instrumentation and control standards — BS 89, BS 1042, IEC 61131-3, IEC 61850, IEC 608705-101, ISA/ANSI and ISO-OSI — applicable to conventional PLC/SCADA systems. These appear to have been carried over from a conventional ICA/SCADA specification.	BWSSB is requested to confirm that the bidder is required to comply only with standards relevant to the offered IoT-based IPMS solution, and that the bidder may submit a deviation list proposing equivalent contemporary IoT, cloud and OT cyber security standards for the Engineer's acceptance, in accordance with the 'more stringent shall apply' clause.	It can be discussed mutually during execution of work
14.	CL.2.24,CL.2.25	Clauses 2.24 and 2.25 provide Approved Vendor/Make lists for instrumentation and automation equipment. The bidder's IoT-based IPMS is a patented, end-to-end integrated platform; its proprietary hardware may differ from the listed makes but meets or exceeds the required performance specifications	BWSSB is requested to confirm that the bidder's own or OEM-equivalent instruments and hardware meeting the relevant performance specifications are acceptable in lieu of the listed makes, subject to submission of technical equivalence documentation and the Engineer's prior written approval.	Accepted
15.	CL.2.13.1(Functional Req.30),CL.2.17; Non-Functional Req.3	Functional Requirement No. 30 and clause 2.17 require the IPMS to provide HRM capabilities including attendance tracking, shift management and employee skills availability.	BWSSB is requested to either: (a) provide a precise definition of the HRM module scope, including integration requirements, hardware obligations and user count; or (b) confirm that the HRM module is excluded from this tender's scope, with BWSSB configuring it post-commissioning using BWSSB supplied data.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
16.	CL.2.13.1(Functional Req.31),CL.2.14.3; Non-Functional Req.3	Functional Requirement No. 31 and clause 2.14.3 require the IPMS to provide asset and inventory management including stock keeping, stock ordering and asset mastering at two hierarchy levels.	BWSSB is requested to either: (a) provide the above details to enable consistent and accurate pricing; or (b) confirm that the Inventory Management module is excluded from this tender's scope, with BWSSB managing asset data independently post-commissioning.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1.
17.	CL.2.14.3,CL.2.15; Functional Req.18	Clause 2.14.3 and Functional Requirement No. 18 require the Repairs and Maintenance module to include penalty calculation for delayed abnormality rectification, SLA/KPI-based escalation, spares inventory tracking and preventive maintenance scheduling.	BWSSB is requested to clarify: (a) whether the penalty calculation feature is to be pre-configured by the contractor or implemented as a configurable module for BWSSB to populate post-commissioning; (b) whether O&M SLA/KPI parameters will be issued to bidders; and (c) whether the spares tracking in cl. 2.14.3 is a separate function from Functional Req. 31 or the same module.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1
18.	CL.2.14.7, CL.2.19.1	Clauses 2.14.7 and 2.19.1 require data to be stored on BWSSB's server or NIC infrastructure, or a Government-approved cloud within India, with 2-year retention and OWASP-compliant multi-layer security. NIC/MeghRaj onboarding has specific eligibility criteria and lead times.	BWSSB is requested to confirm one of the following two acceptable hosting arrangements: (a) The contractor is permitted to host the IPMS platform and all associated data on a MeitY (GoI) -empanelled private cloud infrastructure (such as AWS India Region, Microsoft Azure India Region or equivalent MeitY(GoI) approved cloud service providers), with all data resident strictly within India, compliant with OWASP multi-layer security requirements and subject to a minimum 2-year retention period as stipulated in clauses 2.14.7 and 2.19.1; or (b) If option (a) is not acceptable and NIC/MeghRaj or a BWSSB-owned server is mandated as the exclusive hosting environment, BWSSB is requested to provide the following prior to	Tender conditions prevail

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
			commencement of software deployment: • Server infrastructure specifications — including processor, RAM, storage capacity, operating system, network bandwidth and any virtualisation platform details, so that bidders can assess compatibility with the IPMS platform architecture and price the deployment accordingly; • Access and onboarding support — BWSSB shall provide the contractor with the necessary access credentials, onboarding assistance and infrastructure readiness on the designated platform at no additional cost to the contractor; • Ongoing hosting and maintenance support — details of the level of IT support BWSSB or NIC will extend to the contractor during the contract period and Defects Liability Period, including response times for server downtime, patch management, backup procedures and network access restoration; BWSSB is requested to confirm which of the above arrangements applies and, in the case of option (b), to issue the server infrastructure details and support framework as an addendum to the tender documents, so that all bidders may price the hosting obligation accurately and on a consistent basis.	
19.	CC Cl.37,CI.42, CI 29; Contract Data;CI.2.19.3	Section 5 Clause 37 provides for monthly running bills linked to quantum of physical work executed, with payment within 60 days. Clause 42 provides a 5% mobilisation advance. This contract is supply-and-integration dominant, with major expenditure incurred upfront on imported IoT sensors and	BWSSB is requested to consider adopting the following milestone-based payment structure: (a) 70% — on delivery of BOQ items to site, supported by delivery challans and QAP/inspection certificates; (b) 20% — on completion of installation and erection; (c) 10% — on successful commissioning and handing over. BWSSB is also requested to consider waiving the interest	Milestone-based payment structure: (a) 70% — on delivery of BOQ items to site, supported by delivery challans and QAP/inspection

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
		hardware, software development, cloud platform setup and factory acceptance testing — well before physical installation work commences on site.	charge on the 5% mobilisation advance, given the high upfront cost of imported hardware	certificates; (b) 20% — on completion of installation and erection; (c) 10% — on successful commissioning and handing over.
20.	CI.2.14(i),CI.2.36	Clause 2.36 and the FAT provisions require all field instruments and the integrated IPMS system to be tested at the manufacturer's or system integrator's facility in the presence of the Engineer. The IoT sensors are sourced from reputable global manufacturers fully compliant with the tender specifications. Quantities involved are relatively small.	BWSSB is requested to confirm that inspection of all IPMS components — sensors, edge hardware, communication equipment and integrated software — will be conducted at project site, in accordance with an approved QAP, as provided for in clause 2.14(i) of Part 2.	As per tender
21.	P1: 1.17, 1.18; P2: 2.20.5, 2.20.6, 2.26, 2.27, 2.31	Specifications mandate a complete control system: hot-standby PLC, RIO panels with 16" HMIs, redundant RTU, dual-redundant SCADA servers with 50,000-tag licence, engineering/operator workstations and SCADA commissioning spares.	Clause 2.2.9 of Part 2 (Particular Instrumentation) explicitly states that, for the purposes of this tender, the word 'Control' is limited to sending alarms and alerts to BWSSB officials and station operators, with remote pump operation envisaged only as a future provision. However, Part 1 (clauses 1.17, 1.18) and Part 2 (clauses 2.20, 2.26, 2.27, 2.31) describe a full PLC-based, dual-redundant SCADA control system, and no corresponding BOQ line items exist for any PLC, RTU, SCADA server, HMI panel, workstation or SCADA commissioning spares. In view of this, we request BWSSB to confirm that all PLC, RTU, SCADA server, HMI panel, workstation and SCADA commissioning spare requirements are excluded from the priced scope of this tender, and that only the IoT-	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
			based IPMS items listed in the BOQ are payable under this contract. Please issue written confirmation to this effect.	
22.	2.2.9	Clause states the word "Control" / "SCADA" here means sending alarms/alerts on deviation, with remote pump tripping / auto-manual operation envisaged as a future provision from the IoT/Touch-Screen station.	Clause 2.2.9 of Part 2 (Particular Instrumentation) defines 'Control' and 'SCADA' as limited to alarm/alert monitoring functions, with remote and auto/manual pump operation described as a future provision only. However, clauses 2.20 to 2.31 of Part 2 describe a full PLC-based, dual-redundant SCADA control system with hot-standby PLC, RIO panels, SCADA servers and associated hardware. These two readings imply fundamentally different scopes and contract values. We request BWSSB to confirm that the 'Control' definition in clause 2.2.9 governs the priced scope of this tender — i.e., that 'SCADA' for this package means IoT/IPMS-based alarm/alert and monitoring only — and that the detailed PLC/SCADA hardware specifications in clauses 2.20 to 2.31 are not within the priced scope of this contract.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1
23.	2.18.x vs BOQ	Clause 2.18 specifies, among others: IIoT Noise Sensor (2.18.9), RPM Sensor (2.18.10), Web Camera (2.18.12), Thermal Image Camera (2.18.15).	Clause 2.18 specifies several devices — including the IIoT Noise Sensor (cl. 2.18.9), RPM Sensor (cl. 2.18.10), Web Camera (cl. 2.18.12) and Thermal Image Camera (cl. 2.18.15) — that have no corresponding line items in the BOQ. In the absence of a BOQ provision, these items cannot be priced and any post-award demand for their supply would constitute additional scope. We request BWSSB to confirm that the IIoT Noise Sensor (cl. 2.18.9), RPM Sensor (cl. 2.18.10), Web Camera (cl. 2.18.12) and Thermal Image Camera (cl. 2.18.15) are excluded from the scope of this tender. If any of these items are mandatory, please add the	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
			corresponding BOQ line items with quantities to enable transparent pricing.	
24.	BOQ Item 3	Item 3 – IoT temperature sensor for motor bearing (DE & NDE) – quantity 30 Nos.	BOQ Item 3 specifies 30 Nos. of IoT temperature sensors for motor bearings (Driving End and Non-Driving End). The existing motors at T.K. Halli Stage IV Phase-II already have embedded bearing temperature RTDs, whose signal cables are terminated at marshal boxes outside the motor casing. Installing new contact-type bearing temperature sensors would require dismantling the motor casing, which is outside the scope of this contract. Since the bearing temperature data can be acquired from the existing RTD terminations at the marshal boxes without any motor dismantling, we request BWSSB to: (a) amend the description in BOQ Item 3 from 'IoT Temperature Sensor for Motor Bearing' to 'Bearing Temperature Scanner' — a multi-channel scanner that reads existing RTD signals from the marshal box terminations; and (b) revise the quantity from 30 Nos. to 10 Nos. (one scanner per pump set), consistent with the 10 pump sets in this contract.	Tender conditions prevail
25.	2.24 / 2.25 Approved Vendor lists	Approved Vendor / Make lists are provided for instrumentation and automation; clause notes the list is for the product, not the executing agency.	Clauses 2.24 and 2.25 provide Approved Vendor/Make lists for instrumentation and automation equipment. For an IoT-based IPMS delivered as a patented, end-to-end integrated platform, the bidder's proprietary or OEM-equivalent instruments and hardware form an integral part of the IPMS architecture and may differ from the listed makes. We request BWSSB to confirm that, for the IoT-based IPMS, the bidder's own or OEM-equivalent instruments and hardware meeting the relevant performance specifications are acceptable in lieu of the	Accepted

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
			listed makes, subject to submission of technical equivalence documentation and the Engineer's prior written approval.	
26.	Part 2: cl. 2.4, 2.35 (SCADA Control Room), p.12, 121; BOQ – no CCTV item	Part 2, clause 2.35 (SCADA Control Room Design) and clause 2.18.12 reference IIOT Web Cameras as part of the monitoring system. The control room design section references security and access monitoring. However, BOQ Item 27 covers only the Mobile App; there is no line item for CCTV cameras or a dedicated video surveillance system.	Part 2 clause 2.35 (SCADA Control Room Design) and clause 2.18.12(IIoT web Camera)reference visual monitoring as part of the system .However, no CCTV line item appears in the BOQ, creating a risk of a 'deemed included 'claim during execution if a dedicated surveillance system is subsequently required. we request BWSSB to clarify whether a dedicated CCTV surveillance system-distinct from the IIoT web Camera specified in cl.2.18.12-is within the scope of this contract. If CCTV is in scope, please add a corresponding BOQ line item specifying the number, type and locations of cameras required.If CCTV is not in scope, please confirm this in writing so that bidders do not include such costs.	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1
27	Part 2: cl. 2.9, p.17-19; cl. 2.3, p.10-11; Section 5 (CC) Cl. 37 (Payments)	Clause 2.9 and the minimum scope (cl. 2.3) require the contractor to implement inter-station communication between T.K. Halli, Harohalli and Tataguni (three CWPS) and to raise alarms on communication failure between all three sites, J.K. Doddi and the cloud server. Clause 2.14.1 and Table 1 (Interconnected Pumping Station Alerts) further define downstream/upstream alert logic spanning all three stations.	This tender covers the T.K. Halli IV Stage Phase-II pumping station only. The IPMS being implemented under this contract is a new IoT-based system, entirely independent of any existing SCADA system at Harohalli, Tataguni or J.K. Doddi. Clauses 2.9 and 2.3 require inter-station communication and communication-failure alarms spanning all three CWPS and J.K. Doddi; however, this contractor will have no control over the instrumentation or communication systems at those locations. We accordingly request BWSSB to confirm that communication failure monitoring between T.K. Halli, Harohalli, Tataguni and J.K. Doddi is excluded from the scope of this contract. The contractor's scope should be limited to providing the	Refer updated document Part-2_Perticular instrumentation control and Automation requirement of IPMS.doc attached as Corrigendum-1

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
			communication interface at T.K. Halli in a state ready for future integration when the other stations are commissioned.	
28	Part 2: Functional Req. No. 19, 21, p.44; cl. 2.16 (Performance Monitoring), p.52; cl. 2.18.8 (Inline EM Flow Meter), p.57; BOQ Item 12	Functional Requirement No. 19 mandates real-time pump efficiency calculation by the thermodynamic technique. Requirement No. 21 also requires efficiency calculation through the flow/energy-water-nexus method. The thermodynamic method requires high-accuracy water temperature and pressure measurements at suction and discharge of each pump. BOQ Item 12 provides for only one inline electromagnetic flow meter (Pump No. 2, 800 mm pipe), while the specification at cl. 2.18.8 notes that electromagnetic flow meters are already installed except for one.	Functional Requirement No. 19 mandates real-time pump efficiency calculation using the thermodynamic method, which requires very high-accuracy differential pressure and water temperature measurement at pump suction and discharge. No dedicated high-accuracy differential pressure transmitters or thermodynamic-grade temperature elements appear in the BOQ, and no BOQ provision exists for their supply. Furthermore, the thermodynamic method is typically applied where flow measurement is not feasible; however, cl. 2.18.8 confirms that electromagnetic flow meters are already installed at T.K. Halli Stage IV Phase-II for all pumps except Pump No. 2 (covered by BOQ Item 12), making the flow/energy-water-nexus method (Functional Req. No. 21) the appropriate primary calculation method for this installation. We accordingly request BWSSB to confirm that the thermodynamic method of pump efficiency calculation is excluded from the scope of this tender, with pump efficiency to be calculated using the flow/energy-water-nexus method via the existing and newly supplied electromagnetic flow meters.	Tender conditions prevail
29	Part 2: cl. 2.18.1, p.53; cl. 2.11.11 (Temperature Scanners), p.30; BOQ Item 1	Clause 2.18.1 specifies an 'IoT Temperature Sensor for Motor Windings (contact or contactless)' with probe dimensions of 6–10 mm diameter and 40–50 mm probe length, implying a contact-type RTD/PT100 probe	BOQ Item 1 describes the deliverable as an 'IoT Temperature Scanner for Motor Winding', whereas clause 2.18.1 of Part 2 refers to an 'IoT Temperature Sensor for Motor Windings' with probe dimensions of 6–10 mm diameter and 40–50 mm length. These are functionally	Tender conditions prevail

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
		requiring physical insertion into or contact with the motor winding. BOQ Item 1 describes the same deliverable as an 'IoT Temperature Scanner for Motor Winding', which is functionally and constructionally different — a scanner reads temperatures without contact by sequentially polling multiple RTDs or using infrared scanning.	different devices: a contact-type sensor probe requires insertion into the motor winding slot (necessitating motor dismantling and re-insulation), whereas a scanner reads temperatures from externally mounted or surface-clamped RTDs without any motor dismantling. Since the motors at T.K. Halli Stage IV Phase-II are existing in-service units, motor dismantling is not practicable within this contract's scope. We accordingly request BWSSB to amend the terminology in clause 2.18.1 from 'IoT Temperature Sensor for Motor Windings' to 'IoT Temperature Scanner for Motor Windings', consistent with BOQ Item 1, and to confirm that the solution does not require motor dismantling.	
30	Tender: Section 5 – CC cl. 37 (Payments), cl. 42 (Advance Payments), cl. 29 (Security Deposit); Section 6 – Contract Data; Part 2: cl. 2.19.3 (IPR/Licences)	Section 5 Clause 37 provides for monthly running bills based on the value of work executed (measurement-based), with payment within 60 days of bill submission. Clause 42 provides for a mobilisation advance of 5% of contract price against an unconditional bank guarantee, repayable by 7.5% deduction from each interim payment certificate once total payments reach 15% of contract price or after 3 months from first advance disbursement, whichever is earlier. Security deposit is 5% of contract price (Clause 29). Contract Data (Section 6) is silent on payment terms.	This contract is supply-and-integration dominant, with major expenditure incurred upfront on imported IoT sensors and hardware (sourced from overseas), custom software development, cloud platform setup and factory acceptance testing — well before physical installation work commences on site. The standard monthly running-bill mechanism (Section 5, Clause 37) linked to quantum of physical work executed is therefore ill-suited to this contract and creates significant cashflow risk for specialist IoT/instrumentation contractors. We request BWSSB to consider adopting the following milestone-based payment structure: a) 75% - on delivery of BOQ items to site, supported by delivery challans and QAP, inspection certificates; b) 15% - on completion of installation and erection; c) 10% - on successful commissioning and handing	Milestone-based payment structure: (a) 70% — on delivery of BOQ items to site, supported by delivery challans and QAP/inspection certificates; (b) 20% — on completion of installation and erection; (c) 10% — on successful commissioning and handing over.

Sl No.	Tender Reference	Description as per Tender	Query requested by Bidder	Replies
			over.	
31	2.14	Based on the conditions outlined in "Factory Acceptance Test" (FAT) at page no.2-128 and clause no.2.14 i) at page no.2-50, it is our understanding that the inspection of all items listed in the technical schedules will be conducted at the Bidder's manufacturing/testing/lab facility.	Clause 2.36 and the Factory Acceptance Test (FAT) provisions require all field instruments and the integrated IPMS system to be tested at the manufacturer's or system integrator's facility in the presence of the Engineer, prior to delivery to site. The IoT sensors and hardware used in this project are sourced from reputable global manufacturers and fully comply with the technical specifications in the tender. Since the quantities involved are relatively small and the sensors are standard industrial-grade bought-out items sourced from overseas manufacturers, conducting inspection at each sensor manufacturer's facility abroad is neither commercially practicable nor cost-effective. We request BWSSB to confirm that inspection of all IPMS components — including sensors, edge hardware, communication equipment and integrated software — will be conducted at the site, in accordance with the approved Quality Assurance Plan (QAP), as provided for in clause 2.14(i) of Part 2. This approach ensures complete functional integration testing of all components as an assembled system, which is technically more meaningful than individual component inspection at disparate overseas manufacturing locations.	As per tender.

Chief Engineer
(Cauvery Head Works)
BWSSB